RELATIONSHIP BETWEEN PERSONALITY TRAITS, ATTITUDE AND AWARENESS TOWARDS ENVIRONMENTAL BEHAVIOR AMONG COLLEGE STUDENTS

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INTRODUCTION

The phenomenal increase in human population followed by fast growing industrialization and urbanization in the last few centuries have overstrained the environment resulting in the continuing depletion of natural resources, deforestation, extinction of many plant and animal species, rise in global temperature, environmental pollution, thinning of life saving ozone layer etc. These problems are further being compounded with population explosion, food crisis, hunger, malnutrition, poverty, insanitation, and unbridled consumerism which together have causes serious strains on the essential life support systems of our planet, even threatening all living beings including man himself with disaster or extinction. Now the challenge is to live sustainably and well but within the material limits of finite planet resources (Costanza et al; 1997).

Natural hazards are those environment events that pose serious threats to property, economic and social activities and both mental and physical well-being. Besides this, in an era of shrinking resources and environment degradation, public attention has focused on the need for policy directed at environmental preservation and resources management. Environment psychology perceives that the man not as a passive product of his environment, but as a goal being directed who acts upon his environment and who is in turn is influenced by it. In the changing one's world, man changes oneself. This is the dynamic interchange between man and milieu. Another important feature of environment psychology concerns the method it uses to investigate behavior.

In the study of Agarwal (1999) reports that human environment had also degraded because of the enormous advancement of industrialization. Besides it, urbanization, over-population and poverty also made the problem worse. In the present age human activities exert enormous influence on the natural conditions of the entire planet. Changes in the flora and fauna of land areas are particularly pronounced. (Bawa and Singh, 1987). It is seen that even though the activities of modern man have altered the natural environment of our planet. Until recently, it was generally believed that humans activity represent a sum total influences on environment; but it is not so, effect of adverse human activity caused at local or regional influences are also equally responsible for it. Problems arising from the pollution of human environment were not realized earlier and therefore attention was not paid to make rules and regulations in this regard.

Kaufman (1979) states several salient reasons that have been promulgated by various national and state conservation organizations. They include the following: To do ecological research, to preserve endangered species of plants and animals, to maintain the gene pool –to make available species of plants that can be used for crop improvement or as a source of wild plants that can be used to breed new, more desirable plants for people's food, fiber and comfort; to provide an 'escape' for people from urban ghetto, to purse hobbies such as mushroom hunting, photography and observing birds and other animals, to facilitate nature education.

Thus, many countries have resorted to legislative efforts in protecting the environment. It stipulates that development should be carefully pursued in harmony with nature. There has been a tremendous increase in the number of institutions and organizations on the environmental issues at the grass root level as well as on regional and international base. The number of NGO's in 1972 was 2500 where in 1981 it was 15000. Now there are more than 100 departments that work for environmental protection. As well as the IUCN and the CMC there are many other organizations actively involved in the surveillance and census of wild life and natural resources. These include WWF for the nature (WWF previously the World Wildlife Fund, founded in 1961. Besides the increase of environmental concern, ecological crisis dramatically continues to highlight influential factors on environmental protection such as environmental behavior, awareness, knowledge and attitude. Social scientists have been measuring these components using several instruments. Many of these researchers believed that the knowledge and attitude are linked to each other where attitude is further connected to the behavior. The assumption believes on " if people become more knowledgeable about environment and its associated issues, they will, in turn, become more aware about environment and its problem and thus be more motivated to acts toward the environment in more responsible way." Dunlop, et al (1993) conducted an international survey on environmental values, twenty four countries all over the world including developed and developing nations had participated. From each country, around one thousands sample selected. The survey's results showed that citizens of many developing nations were highly concerned. The present study also shows personality traits, environmental awareness, and environmental attitude of college students in relation to their environmental behavior.

The global community has now become aware of the environmental crimes in the face of growing ecological imbalance. A strategy is to be adopted to save the earth and equitable distribution of natural resources so that they remain sustainable, and at the same time enough of them are left for the future generation.

PERSONALITY TRAITS

Personality is the ever changing, yet relatively a stable organization of all physical, psychological and spiritual characteristics of an individual that determines his/her behavior in interaction with the environment. Definition of trait share basically a common focus: that it is a feature of person's behavior. Freeman (2003) defines a trait as "a generalized mode of behavior or a form of readiness to respond with a marked degree of consistency to set of situations that are functionally equivalent for the respondent. Traits are also a readiness to think or act in a similar fashion in response to a variety of different stimuli or situation. As a result, correlation between personality and behavior increases substantially. What makes a personality stable, first, heredity is at work. As it is noted, genes contribute to individual differences in all five of the Big Five Personality factors. Second, lasting effects of childhood experiences may contribute to its becoming an enduring pattern of response. Needs are triggered by external as well as internal stimuli, so personality cannot be studied in isolation from environmental forces. "At every moment, an organism in within an environment which largely determines its behavior, the press of an object is what it can do to the subject or for the subject the power it has to affect the well-being of the subject in one way or the other. These new conceptualization of the role of genetic contribution as constraining environmental influences have implications for preventing unwanted personality traits or temperaments and even psychological disorders.

Many researches made by the scientists and results show that the Big Five personality traits are related to environmental values and behavior at the individual and national level. This helps in making of new programs and modifies policies related to environmental behavior. The Big Five Personality trait model is the most accredited psychological premise on personality traits. The five traits are Agreeableness, Conscientiousness, and Openness to new experiences, Extroversion, and Neuroticism (or its inverse, Emotional Stability). Agreeableness is related to likability, friendliness, and pleasantness. Conscientiousness is related to conformity, dependability, and constraints. Openness to new experiences is related to cognitive intellect,

culture, imagination. Neuroticism is related to anxiety, emotional stability (-), negative emotionality. Extraversion is related to sociability i.e. cognitive/ affective preference for and enjoyment of other people. Many researches shows that Agreeableness and Conscientiousness positively contributed in prediction of environmental behavior and low levels of Neuroticism show negative contribution towards environmental behavior.

ENVIRONMENTAL ATTITUDE

Environmental Attitude is "a learned predisposition to respond consistently favorable or unfavorable manner with respect to the environment." Generally, an attitude can be defined as a tendency to evaluate an object or an idea in a positive or negative way. That is, attitudes involve affect or emotion- felling of pleasantness or unpleasantness, like or dislike, for something. Since environmental perception includes affective and cognitive components, it is easy to see that environmental perception and attitude are closely related. Basically, attitude formation involves principles of learning. Most attitudes appear to be formed through classical or instrumental conditioning or through social learning. From the classical conditioning perspective, the reinforcement- affect model of evaluate responses proposed by Byrne and Clore (1970) is highly applicable. In addition to classical conditioning, attitudes can be learned through instrumental conditioning, also known as operant, Skinnerian or Type 2 conditioning. Expression of an attitude leads to positive or negative consequences, and the attitude that is rewarded will be maintained and strengthen. For e.g. If car pooling to save energy, cut down on freeway traffic volume, being forced to ride with a particularly obnoxious person, then attitude towards car pooling likely to be negative. Thus rewards and punishments frequently instrumentally condition our attitude toward the environment. Another way in which attitudes are formed is social learning. According to Bandura (1974) if person observes another person (model) behave in a certain way, person may imitate that behavior.

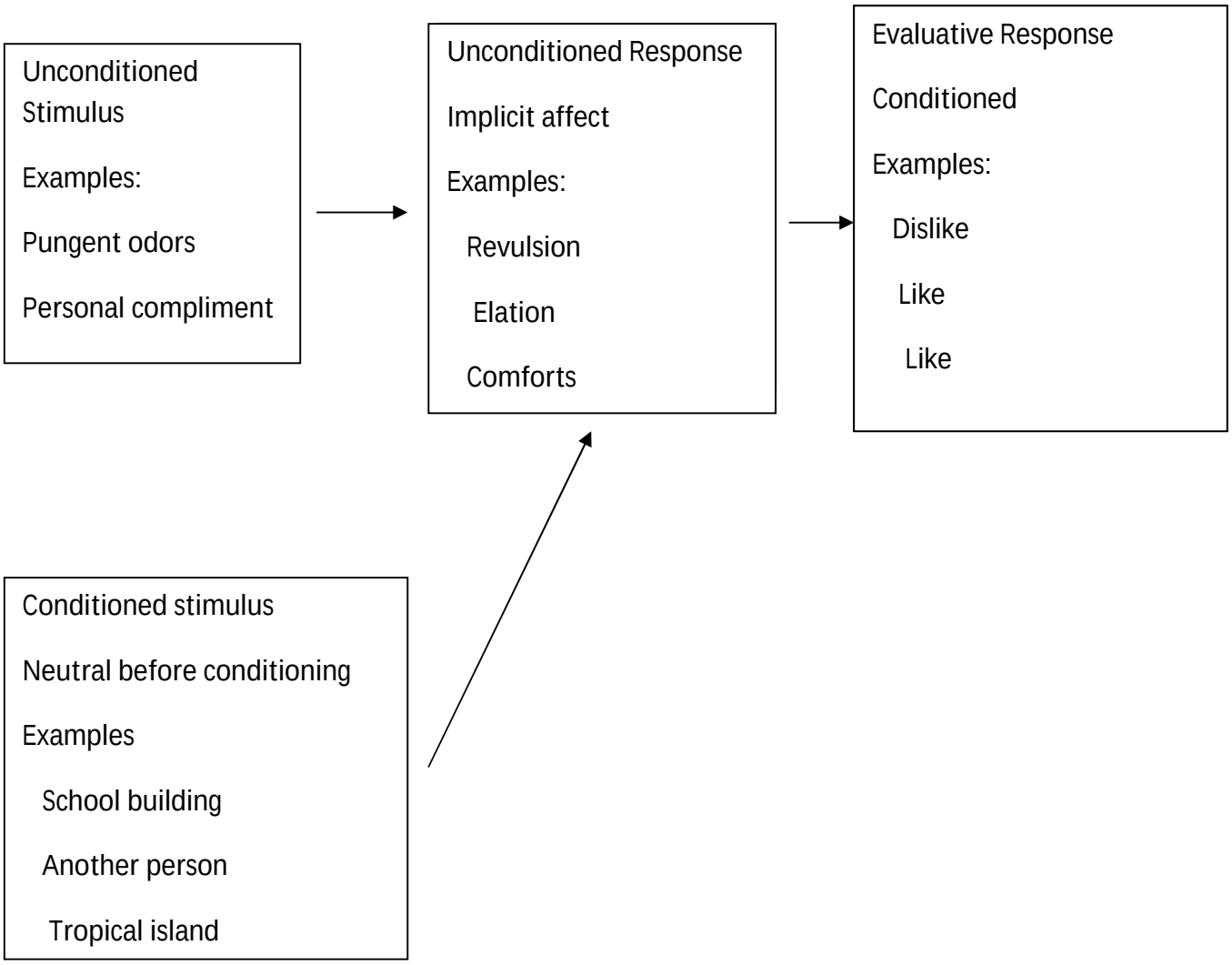

Figure 1: The Byrne-Clore Reinforcement-Affect Model of Evaluative Responses

Jenkins and Pell's (2006) study with English students indicated statistically significant effect of gender on environmental attitudes and environmental concern. On average, girls have more positive attitude towards environment then boys

ENVIRONMENTAL AWARENESS

Environmental Awareness can be defined as, "to acquire concern and sensitivity towards the environment and its problem." The term'Environmental Awareness' has a broad connotation. It

not only implies knowledge about environment but also attitude, values and necessary skills to solve environment related problems. Moreover, environmental awareness is the initial step ultimately leading to the ability to carry on responsible citizenship behaviour.The need for environmental awareness is because the deepening and widening environmental crisis to human activities is threatening the very existence of mankind. The present direction and perception of development to meet human needs and to realize human ambitions are simply unsustainable. Today's policymakers will not be there tomorrow when the planet feels the more grim effects of global warming, ozone depletion or widespread desertification. That is why; environmental awareness is the need for the hour. By teaching friends and family that the physical environment is fragile and indispensable people can begin fixing the problems that threaten it. Numerous resources are available to promote environmental awareness; group learning (in or outside of class), informational and environmental books and brochure are just a few of the tools that can get people involved in promoting the environment. However, interest in environment has now spread to large sections of society. Eco-development is that term that various groups and organization are talking about now. People realize now from variety of experiences that economic sustainability is dependent upon the existence of local, living cultures that have an inside relationship to nature, societies that are based on meaningful work. Awareness is the most important key to development and to every sphere of life. Awareness equips people with the ability to solve all kinds of social and environmental problems.

Civic education assisted with proper media and awareness campaigns regarding the importance of environmental health is vital to enhance the protection and well use of natural resources, and to reach a sustainable future in any community. Nkosi (2002) carried out a community oriented education program on biological diversity, conservation and sustainability. It emphasized the need for a public education program. This program was intended to be seen as an investment in the people by teaching them a self-regulating culture that would help raise awareness of the role biodiversity and conservation can play in sustainable development among the most vulnerable communities in the developing world. Environmental awareness in vulnerable communities in developing countries can be improved through both formal and non-formal education. Mass media, art, and traditional knowledge, are elements that can greatly contribute to the encouragement of environmental awareness in developing countries. Experience has shown that

NGOs can be very effective in promoting environmental awareness in poor urban or rural based communities. However, experience has also shown it is undesirable and not convenient to by-pass government institutions regardless of how unsuccessful they are.

ENVIRONMENTAL BEHAVIOUR

Environmental Behavior can reasonably defined by its impact to which it changes the availability of materials or energy from the environment or alters the structure and dynamics of eco-system or the biosphere itself (Stern, 1997). A walk across a meadow, planting the tree, firing the grass, feeding the gulls or exporting the solvents into the water bodies. All these activities have something common. There are examples of human behavior which has a certain influence on the environment greater or smaller, positive or negative. Nevertheless, as people are in an interaction with their environment almost constantly, almost all human behavior could be called **environmental behavior**.

The meaning of the term "environmental behavior" unwinds from the contemporary conditions in which social studies study environmental behavior. Environmental behavior therefore is, in narrow sense, such a behavior which has a significant impact on the environment (Churchman 2002, and Stern 2000). Environmental behavior of an individual may be unintentional and not reflected; in such case the person does not realize the impact of his/her behavior-e.g. many people buy soya products, cut flowers or cigarettes. In case the person realizes the environmental impact of his/her action, he speak about so called **intentional environmental behavior** or directly about **environmental behavior.**

Most cases of environmental behavior can be, based on the knowledge of environmental science or ecology, judged according to their impact on the environment, and labeled as environmentally friendly or unfriendly. Some cases can be judged easily, e.g. a bicycle ride is more positive than the ride in a car, holiday located near home are more favorable than travelling to another continent. What the term pro-environmental signify. Pro environmental behavior is such behavior which is generally (or according to knowledge environmental science) judged in the context of the considered society as a protective way of environmental behavior or a tribute to

the healthy environment. Environmental issues nowadays include a wide range of phenomenon which is in the area of environmental protection generally considered as negative. Among them four areas of environmental issues are distinguished: Litter, distortion or the of natural monuments and abuse of countryside is to a great extent; extent issues of environmental aesthetics; issues connected with health are the air pollution, toxic materials in environment or the level of radiance enhanced by the human activity; the core of the natural resources issues is the excessive exploitation of unsustainable mineral resources such as coal or petrol or sustainable water, soil resources; mass agriculture breeding, testing the cosmetic products on animals, destruction of natural biotopes and creation of migration barriers may be covered in the issue of life protection and its dignity.

The human behavior to the environment is influenced by **external factors** (that means the environment of an individual) and **internal factors** (physical and mental aspects of an individual). Some factors influence wide social groups (ecological tax reform, areal introduction of sorting containers) while the others can have an impact only on a couple of individuals, it is important to take into consideration that personal motivation to protect the environment is for the final environmental behavior of an individual the key factor only in some cases. To learn the factors which influence the environmental behavior, it is necessary to go step-by-step:

1) Understand the system of factors which influence the environmental behavior of an individual; that means, at the beginning acquire the concepts which improve the orientation in complex issues. Activities such as publishing of abstracts, creation of cross-disciplinary bibliographies, sorting the professional terminology etc. are useful as well.
2) Systematically uncover the factors which influence the environmental behavior and their mutual relationships, that means create a complex map of these factors.
3) Examine qualitatively qualities of the so-called key factors which have a crucial influence on the behavior of wide social groups to the environment, e.g. by using experiments, comparative and correlative studies.

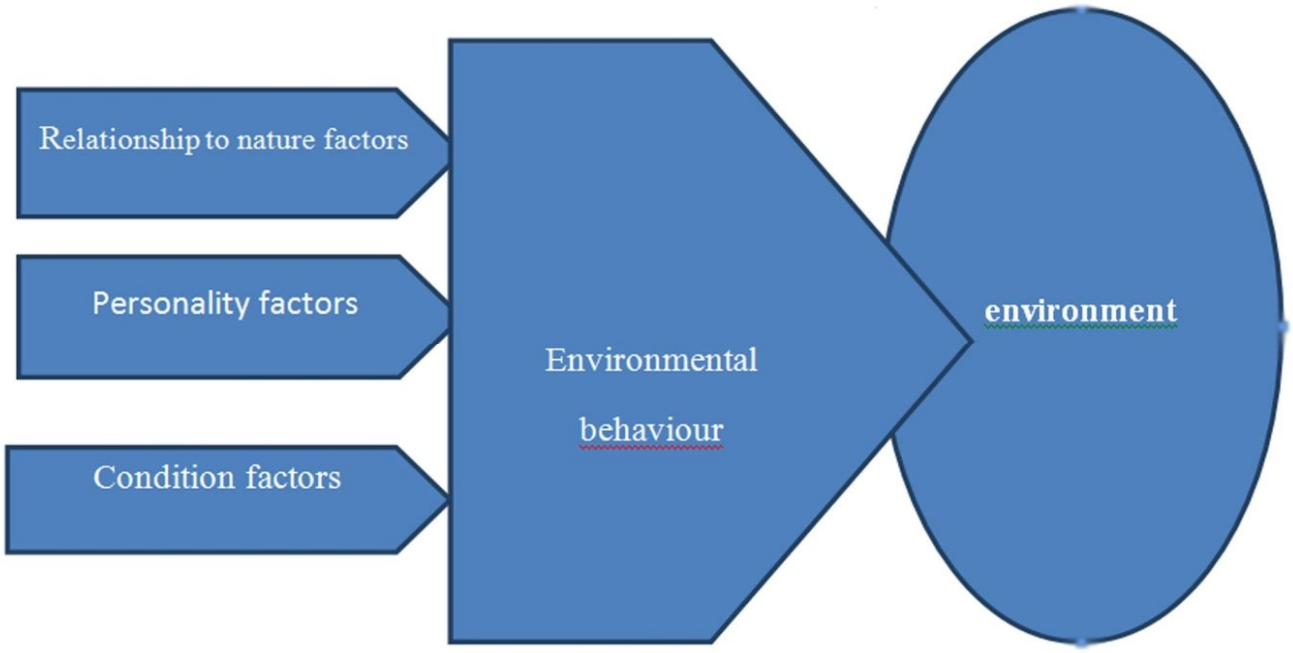

Figure 2: Influences of human behavior on the environment

As stated above, the research work starts by the orientation in the issue. Therefore, the original concept of so-called **orientation map of three areas of factors due to which environmental behavior is influenced are**:

- **Factors of the personal relationship of an individual to nature,**
- **Factors of the personality of an individual,**
- **Factors arising from the conditions of the environment (external condition).**

Several researchers have examined simple associations between environmental behaviour and demographic and socio-economic characteristics of individuals and households. Owens *et al.* (2000), for example, found strong, positive associations of annual household income, home-ownership status, and level of education with recycling efficiency. The best known, most frequently applied model is called the **Theory of Planned Behaviour**, which suggests that, to a large degree, human actions can be explained by understanding human attitudes, of which environmental attitudes are just one type. Icek Ajzen, widely credited with developing the theory in 1988, argued that attitudes toward a given behaviour, subjective norms about that behaviour (or the social expectations of individuals concerning the behaviour), and perceived level of control over the behaviour all contribute to behavioural intentions. Those behavioural intentions combine with an individual's perceptions of control to produce the actual behaviour.

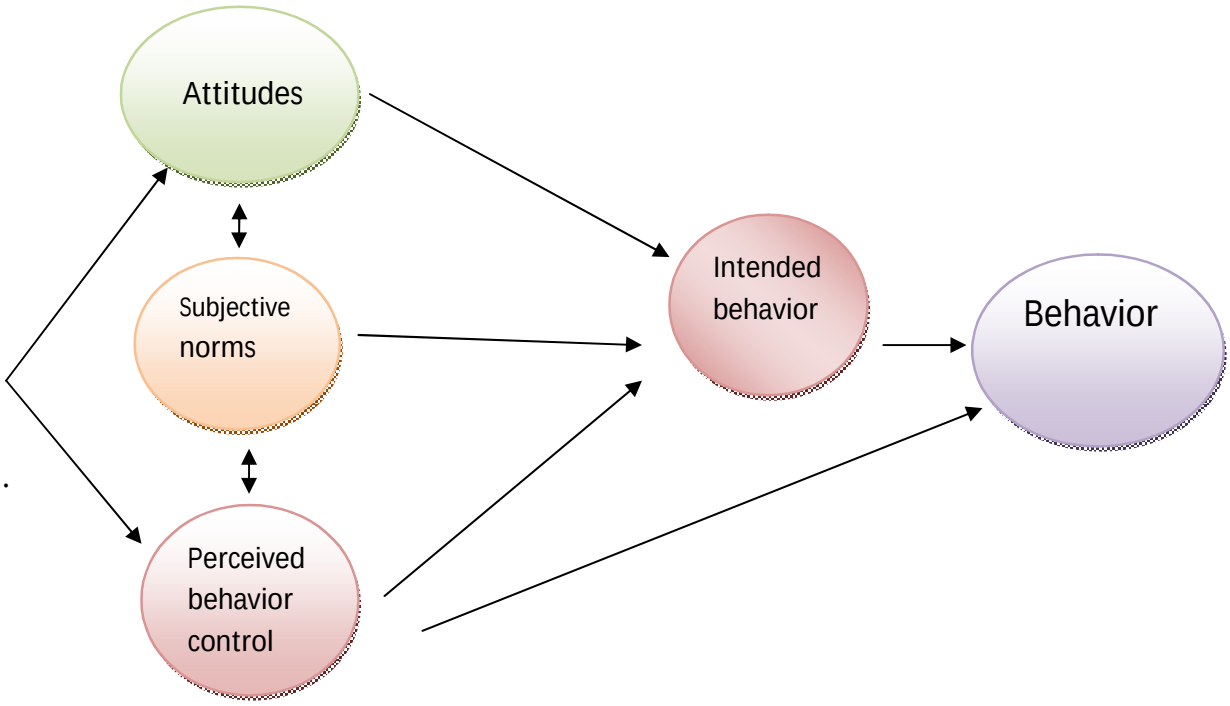

Figure 3: Icek Ajzen's Theory of Planned Behavior

A person with a higher **environmental sensitivity** is attracted by the nature around them, interested in it, sometimes even absorbed by it. They perceive the beauty of nature as well as its damage. So, the time has come to be aware, become knowledgeable and form positive attitude in determination of positive environmental behavior to save the environment. Efforts are being made to conserve our natural resources therefore, world educators and environmental specialists are repeatedly pointing out that solution to environmental crisis will required environmental awareness and understanding to be deeply rooted in the education system at all levels. The ultimate objective is to stabilize the imbalance of environment by way of bringing awareness among children and youths. Ultimately youths are the building blocks of the nation.

METHOD

STATEMENT OF THE PROBLEM

To study the inter-relationship among personality traits, environmental awareness, environmental attitude and environmental behavior among college students.

JUSTIFICATION OF THE STUDY

Environment is a global concept today. It is observed that degradation of environment mostly occurs due to destruction of natural environment. Now there is a cry all over for protection and preservation of such natural resources. This can only be possible if college students have the right type of attitudes towards such issues and have proper knowledge and awareness in the related matters. Knowledge is a precondition for environmental awareness to ignite college students. It is the student's ability to understand and evaluate the impact of society on the ecosystem. To change behavior towards the environment, investigator must understand college students' personality. Personality informs beliefs values, and attitudes and scientists have found that personality factors can influence the likelihood to engage in environmentally sensitive practices. There is lot of research work done on the sample of senior secondary students but there is also a need to research on college students. College students provide a linkage between children and the bright future adults upon which the future of the country rely. The age of the college students is right age to acquire knowledge about the environment which they surpass to their upcoming future.

Today all lives are at stake due to environmental pollution and the root cause of this is over population, greed and unconcerned attitude of human beings towards humanity. There is lot of awareness about the protection of environment that is taking root amongst youngsters. That is why investigator has selected college students as a sample for the research study. The main focus is to change environmental behavior through increasing environmental awareness, attitude and knowledge. Personality traits only explain some of the effects on environmental engagement. Nonetheless, even the small effect that personality has on environmental engagements may be enough to help the planet. As such, the environmental protection and preservation has been an urgent need of the hour.

If the awareness manifests itself in the form of execution then the world will be a better place to live in. College students often talk of clean and green environment but little do they think of using eco-friendly products. They should be encouraged in tree plantation and maintenance,

social forestry, environment education and extension program. The investigators have tried to identify environmental attitude, knowledge and awareness in determining the environmental behavior of college students, among Boys and Girls, of Agra city.

OBJECTIVES OF THE STUDY

1. To find out the relationship of personality traits, environmental awareness, and environmental attitudes and environmental behavior among college students.
2. To find out the relative contribution of personality traits, environmental awareness and environmental attitude in determination of environmental behavior.

HYPOTHESES

1) Environmental behavior will be positively related with personality traits, environmental awareness, and environmental attitudes.
2) Environmental awareness will be positively related with personality traits, and environmental attitude.
3) Personality traits will be positively related to environmental attitude.
4) Contribution of environmental attitude will be most remarkable as compared to that of personality traits and awareness in determination of environmental behavior.

OPERATIONAL DEFINITION OF THE TERMS:

1. **Personality Traits:- "** The quality of condition of being a person. The totality of qualities or traits, as of character or behavior, that is peculiar to a specific person." (The American Heritage Dictionary of the English Language, 2001).
2. **Environmental Awareness**:- "Environmental awareness is concern towards environment or environmental problems. In other words it is defined as, an idea holding a general impression or consciousness about something without having to know much about it." (Roberta, 2009).

3. **Environmental Attitude:- "**Environmental attitude is a learned predisposition to respond consistently favorable or unfavorable manner with respect to the environment."(Uitto, 2004).
4. **Environmental Behavior:- "**Environmental Behavior can reasonably defined by its impact the extent to which it changes the availability of materials or energy from the environment or alters the structure and dynamics of ecosystem or the biosphere itself." (Stern, 1997).

SAMPLE

A convenient sample of 300 students of college level will be selected from the various colleges of Agra city. Out of 300 students, 150 girls and 150 boys will be selected. The age range is between 17 to 20 years.

DESIGN

In present research a correlation design will be made to study the relationship among personality traits, environmental awareness, environmental attitude and environmental behavior among college students.

VARIABLES

PREDICTOR VARIABLES

1. Personality traits
2. Environmental attitude
3. Environmental awareness

CRITERION VARIABLE

. 1. Environmental behavior

CONTROL VARIABLES

1. AGE- 17 to 20 years
2. SEX- Boys and Girls (150 Boys, 150 Girls)

TOOLS USED

1. **HEXACO 60 Personality Inventory (HEXACO-PI-R):-** It is developed by Ashton and Lee, (2009). It measures six dimension of personality including Honesty-Humility, Emotionality, Extraversion, Agreeableness, Conscientiousness and Openness to Experience. Each item alternative is assigned a weightage ranging from 1 strongly disagree to 5 strongly agree. The scale has high internal consistency reliabilities. Reliabilities ranged from .89 (Conscientiousness) to .92 (Honesty-Humility). Also the scale was found to have the high convergent validity.

2. **Environmental Awareness Ability Test (EAAM-J):-**It is developed by Jha, (1998). This EAAM contains 51 items based on various environmental factors:-
   - Causes of pollution
   - Conservation of soil, forest, air etc.
   - Energy conservation
   - Conservation of human health
   - Conservation of wild-life and animal husbandry

It is highly reliable and valid test and standardized on 300 boys and 300 girls from college level. The reliability of the test was found to be 0.84. Also the scale was found to have the validity of 0.74.

3. Environmental Attitude Scale (TEAS):- The Taj Environmental Attitude Scale was developed by Taj in 2001.Following the Likert's summated rating procedure, TEAS was developed with 61 items consisting six areas. The six areas dealt with the scale are attitude towards:-

1. Wildlife

2. Health and hygiene

3. Forest

4. Pollution

5. Population explosion

6. Environmental concerns

Each item alternative is assigned a weightage ranging from 4 (strongly agree) to 1 (strongly disagree) for favorite items. In case of unfavorable items the scoring is reversed, i.e. from 1 (strongly agree) to 4 (strongly disagree).The attitude score of an individual is the sum total of item score on all the six areas .The range of scores is from 61 to 244 with the higher score indicating the more favorable attitude towards the environment and vice-versa. Reliability of the scale is estimated by the Split-Half is 0.82, which is highly significant. The scale also possesses high content and item validity. Norms are in stanine grade.

3. **Environmental Behavior Scale (EBS-SSV):-** It is developed by Singal, Singal and Verma in 2010.This scale consist 60 items in 10 areas. The 10 areas dealt with the scale are behavior towards (1) Air pollution, (2) Water pollution, (3) Noise pollution, (4) Land pollution, (5) Water conservation, (6) Forest conservation, (7) Biodiversity conservation, (8) Human Health conservation, (9) Energy conservation & management, (10) Environmental conservation & management. Reliability of the scale is estimated by Test-retest method is 0.79. This scale also has face and content validity.

ANALYSIS OF DATA

Data will be analyzed by using the Product Moment Correlation Coefficient and Multiple Regression Analysis will be formed to estimate the relative contribution of each predictor variable (personality traits, environmental attitude, and environmental awareness) in the prediction of criterion variable (environmental behavior).

PILOT STUDY

In order to find out the relative contribution of personality traits, environmental awareness and attitude in determination of environmental behavior. The investigator has conducted a pilot study. A sample of 50 students including 25 boys and 25 girls of age group 17-20 years of Dayalbagh Educational Institute, Agra was selected. The tool used for the study was NEO- Five Factor Inventory, Environmental Awareness Ability Test (EAAM- J), Environmental Attitude Scale (TEAS), and Environmental Behavior Scale (EBS- SSV). After statistical analyses the conclusion was the personality traits, Agreeableness and Extraversion were the most contributing factor in predicting the environmental behavior. Environmental attitude and awareness also contributed in prediction of environmental behavior.

REFERENCES

- Agarwal, H. O. (1999). *International law and human rights*. Allahabad: Central Law Publication.
- Ashton, M. C., & Lee, K. (2009).The Hexa Co 60: a short measure of dimension of personality. *Journal of Personality Assessment*, 91(4), 340-341.
- Bawa, R., & Singh, R. (1987). Heritage conservation of natural protected area. In D. Bandhu, & G. Berberet (eds*.) Environmental Education for conservation and development*. New Delhi: Indian Environmental Society.
- Bandura, A. (1974). Social learning of attitudes. As cited in D.Fisher, P.A. Bell, & A. Baum(1990). *A book of environmental psychology* (2nd ed.) USA: Wadsworth Group & Thomson Learning.
- Bell, A. (2001). *Environmental Psychology* (5th ed.) Washington: Lawrence Erlbaum Ltd.
- Byrne, B. & Clore, G. (1970). Reinforcement affect model. As cited in D.Fisher, P.A. Bell, & A. Baum(1990). *A book of environmental psychology* (2nd ed.) USA: Wadsworth Group & Thomson Learning.
- Constanza, R. (1997). The value of the world's ecosystem services and natural capital*. Nature, 38*(7), 253-255.
- Costa, P. T., & McCrae, R. R. (1992). *Neo Five- Factor Inventory (NEO-FFI).* Professional manual. Odessa, Florida: Psychological Assessment Resources.
- Dunlop, R., Gallup, G., & Gallup, A.(1993). Results of the health of the planet survey. *Environment, 35*(7), 39.

- Freeman, A., Stone, M., & Martin, D. (2005*). Borderline Personality Disorder: A practitioners' guide to comparative treatments.* New York: Springer Publishing Company.
- Jenkins, E. W., & Pell, R. G. (2006). Me and the environmental challenges: A survey of English secondary school students' attitude towards the environment. *International Journal of Science Education, 28*(7), 765-780.
- Jha, P. (1998). *Environmental Awareness Ability Test (EAAM- J).* Manual. India: National Psychological Corporation.
- Kaufman, B.P. (1987). *The environmental landscapes- untouched touched and retouched.* In Kaufman and La Croix (Eds.) *Plants, people, and environment.* New York: Mac Millan Publishing Co. Inc.
- Nkosi, B. S. (2002). Community education for biological diversity in the Shiselweni region of Swaziland. *Journal of Biological Education, 36*(3), 113.
- Owens, S. (2000). Engaging the public: Information and deliberation in environmental policy. *Environment and Planning A, 32*(7), 1141-1148.
- Singal, A., Singal, P., & Verma, U. (2010). *Environmental Behavior Scale (EBS- SSV).* Manual. India: National Psychological Corporation.
- Stern, P. C. (2000). Towards a coherent theory of environmentally significant behavior. *Journal of Social Issues, 56*, 407-424.
- Taj, H. (2001). *Taj Environmental Scale (TEAS).* Manual. India: National Psychological Corporation.